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CIVIL AERONAUTICS BOARD

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Evaluation of Economic Behavior and Other Consequences of Civil Aviation System Operating With Limited or no Regulatory Constraints

CIVIL AERONAUTICS BOARD

[Docket No. 28048]

EVALUATION OF ECONOMIC BEHAVIOR AND OTHER CONSEQUENCES OF CIVIL AVIATION SYSTEM OPERATING WITH LIMITED OR NO REGULATORY CONSTRAINTS

Advance Notice of Proposed Actions

Notice is hereby given that the Civil Aeronautics Board has under consideration a series of actions designed to assess economic behavior and other consequences of a civil aviation system operated in an environment having limited or no regulatory constraints. The proposed actions will constitute a series of experiments for the purpose of providing information and guidance to the Board, Congress, the Executive Branch, the civil aviation industry and the public as to future commercial aviation regulatory policies.

This Advance Notice is being issued to invite comment on the Board's proposed actions by the general public, Congress, the aviation industry (including air carriers, manufacturers, financial institutions, and travel agents), interested governmental agencies, communities, and organizations representing labor and consumer interests.

Certain materials will constitute initial comments to be incorporated into this proceeding. The foremost is the "Report of the CAB Special Staff on Regulatory Reform," the independent internal CAB staff study to be issued in July, 1975.[1]

Although we shall consider all comments submitted, we look forward with particular interest to comments which address the following:

1. What specific markets, city-pairs, or satellite airports would best serve the purposes of the experimental program within the constraints outlined.

2. What types of data should be collected, monitored and measured.

3. What further procedures, if any, are necessary or recommended for implementation of the suggested experimental program.

4. Identification of any aspects of the suggested experimental program (a) which may not represent a valid test of likely results under a system of freer entry and pricing nationwide, or (b) which may not generate and permit the collection of useful data, together with any recommended modifications in the proposed experimental program to improve the validity of the test.

5. What alternate program of experimentation might better serve as a valid test of the desired areas of inquiry than the experimental program suggested herein.

6. In terms of the suggested program of experimentation or the commenter's recommendations as to modifications therein, what, if any, specific legal constraints exist?

The purpose of this proceeding and the nature of the proposed actions are discussed in the attachment, "A Proposed Means of Evaluating The Consequences of Changed Approaches to Economic Regulation of The Domestic Commercial Air Transportation System, Prepared by The Staff of the Civil Aeronautics Board and Harbridge House, Inc., Boston, Massachusetts, July 1975". This action is being taken to consider the possible commencement of other proceedings, the issuance of rules, and the taking of various other actions by the Board, all under the authority of The Federal Aviation Act, as amended.

Interested persons may participate in this proceeding by submitting twelve (12) copies of written data, views or arguments pertaining thereto addressed to the Docket Section, Civil Aeronautics Board, Washington, D.C. 20428. All relevant material received on or before September 15, 1975, will be considered by the Board. Copies of such communications will be available for examination by interested persons in the Docket Section, Room 710, Universal Building, 1825 Connecticut Avenue, NW., Washington, D.C., upon receipt therefor.

Individual members of the general public who wish to express their views may do so through submission of comments in letter form to the Docket Section at the above indicated address, without the necessity of filing additional copies thereof.

Dated: July 7, 1975.

By the Civil Aeronautics Board.

[SEAL] EDWIN Z. HOLLAND,
Secretary.

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[1] Other materials are: "Airline Regulation by the Civil Aeronautics Board," Report of the Senate Subcommittee on Administrative Practice and Procedure (final report scheduled for issuance later this summer); "Consequences of Deregulation of the Scheduled Air Transport Industry, An Analytical Approach," The Air Transport Association of America (April, 1975); "Economic Regulation of Domestic Air Transport, Theory and Policy," George W. Douglas and James C. Miller III, (The Brookings Institution, 1975), The Brookings Institution; and "The Local Service Airline Experiment," George C. Eads (The Brookings Institution, 1972); "Airline Regulation in America: Effects and Imperfections," William A. Jordon (The Johns Hopkins Press, 1970); The Domestic Route System—Analysis and Policy Recommendations (A Staff Study by the CAB Bureau of Operating Rights—October 1974).

A PROPOSED MEANS OF EVALUATING THE CONSEQUENCES OF CHANGED APPROACHES TO ECONOMIC REGULATION OF THE DOMESTIC COMMERCIAL AIR TRANSPORTATION SYSTEM

PREPARED BY
THE STAFF OF THE CIVIL AERONAUTICS BOARD
AND
HARBRIDGE HOUSE, INC., BOSTON, MASSACHUSETTS

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PART I. FRAMEWORK

A. Introduction

The issue of what kind of air transportation system we should have--regulated or unregulated--has been debated for nearly as long as we have had air service. It is not an issue that will resolve itself. If anything, time has intensified the debate and hardened opposing positions.

The economic problems we have in the nation today are caused in part, it is claimed, by the inflation factors built into regulated industries--particularly transportation industries, and most particularly, perhaps, air transportation. The time has come, therefore, to establish a process to resolve the regulation issue confronting commercial aviation. But resolution of what kind? In which direction should we move?

Some very knowledgeable people argue that the present system is outmoded and inefficient, and suggest immediate and fundamental changes. Equally knowledgeable people maintain that the system is basically sound and serves us well. Moreover, they warn that it is delicately balanced, and could be destroyed with injudicious tampering.

Still others see merit in aspects of both arguments. But they are uncertain about the consequences of pursuing a particular regulatory course, and concerned that essential information is missing. To this group, the following sequence of questions is offered:

- Is it desirable for the country to undertake fundamental changes in its approach to the regulation of commercial air transportation?
- If major changes are desirable, do we have an adequate information base to make them--to know what changes to make, and what consequences can be expected?

- Is it possible for the government to launch an effort to improve this information base and to undertake desirable changes, while minimizing hazards to the system and risk for the traveling public and the industry?

Doubt plainly attaches to the first and second questions. This doubt--plus a positive belief regarding the third question--is what has prompted this effort. The objective of the effort--put simply--is to construct a means of obtaining the data needed (i) to evaluate the consequences of the major changes that have been proposed in air transportation and (ii) to make the necessary decisions about their desirability.

B. Nature of the Debate: Overview

At its roots, the debate can be reduced to the question of what kind of commercial air transportation system is in the best national interest:

- An essentially unregulated system, which might operate in ways that could produce greater competition and different--higher and lower--fares and service levels in different parts of the system.

- A regulated system such as we have now, in which competition and fare levels are controlled, and uniform service is available to all areas of the nation.

As will be seen, definition of what the national interest objectives in air transportation are--or should be--is a pivotal point in the debate. The objectives are discussed below in Section D.

1. The Deregulators' Position

Critics of regulation argue that the industry has matured to a point where economic regulation is no longer necessary and has, in fact, become counterproductive: both unnecessarily restrictive and overly protective of currently certificated carriers.

Those who want to deregulate the system maintain that the primary goal of the air transportation industry, like any other, should be maximum economic efficiency. They believe that in the process of achieving this goal, which presumably would reduce fare levels, the industry would also achieve other desirable goals (system growth, system stability, efficient mail service, and so on). As they see it, therefore, paramount concern with economic efficiency is in the national interest.

Promotion of this goal, the deregulators argue, should also be the primary objective of the Civil Aeronautics Board. However, the objectives that have been established for the Board are at considerable--if not direct--variance with achievement of maximum economic efficiency. As things stand now, critics claim, the Board's mission is to maximize the number of city pair markets that receive air service, while ensuring that public subsidy is kept to a minimum and that the carriers earn an acceptable profit. But this mission has resulted in:

- Restricted competition leading to excessively high costs and inadequate choices of service in many cases.
- Excess capacity.
- Exploitation of profitable markets to subsidize unprofitable markets.
- Excessive investment in equipment and other resources by the carriers, and an uneconomical rate of new product development by aircraft manufacturers.

Critics claim that economic regulation is an obstacle to achievement of maximum economic efficiency; that it is not in the public interest and should be eliminated. (They do not favor elimination of safety regulation, but point out that Congress has already made this a separate activity to be performed by the Federal Aviation Administration.)

2. The Proregulators' Position

Supporters of regulation concede that the regulatory process could be improved. But they maintain that our air transportation system has, rightfully, always been seen as an instrument of social policy. As such, it requires both economic and safety regulation.

Proregulators point out that "just and reasonable" fares are only one of the many objectives which the law has established for the system. The others, such as providing for the national defense, the Postal System, and safety standards, are equally important, and the balance that the Board attempts to achieve among them is what best meets the public interest. Moreover, proregulationists reject the charges that the industry lacks competition and charges inflated rates. They claim that it is highly competitive and that rates are, in fact, significantly lower than rates for comparable service in other countries.

Their position is substantiated, supporters believe, by the health of our air transportation system, which has flourished within the existing regulatory framework. It provides safe, economic, and reliable service of a quality unmatched elsewhere in the world. They fear that to deregulate it, or to modify it in major ways, could destroy the strong, but highly interdependent network that has evolved, and substantially reduce service in many communities. They believe the deregulators are overly mechanical in their approach and do not take into account the benefits of a mature, interconnected system.

3. Who is Right?

Which side of the regulatory debate is correct?

The rationale for this effort lies in the belief that no one really knows. There has been a good deal of speculation on both sides and some evidence to support each position. But the evidence is not conclusive.

As a nation, we need to ask some hard questions and to obtain some hard answers about what is being suggested. The information should be complete enough to support reasoned decisions and substantial enough to satisfy reasonable people on both sides of the issue. But it should not be obtained at the risk of great damage to the system itself.

With the current level of service provided by our air transportation system at stake, the margin for speculation about regulation is slim. We could be dealing with changes in an $11 billion industry that is one of the major segments of our social and economic infrastructure. Before we undertake these changes, it seems prudent to have a better idea than we have now of what the consequences of these changes will be. To do otherwise would be irresponsible.

C. Approach and Scope of This Effort

1. Approach

This effort is conceived of as a continuing process, not a one-time endeavor to answer a few critical questions. It is anticipated that as one set of questions is answered, new questions will be surfaced and new data will be developed in a continuous, dynamic framework.

This effort will proceed in two tasks. The first task is to design an acceptable-risk method of obtaining the information we need. The second task is to implement the design and to present the findings as a basis for orderly decision-making. The first of these tasks will be completed here in three steps:

- Identification of the major changes being proposed to our air transportation system, and evaluation of the arguments made for and against these changes.

- Identification of the additional information that must be obtained--that is, the critical

questions that need to be asked--before decisions can be made.

- Design of a means for obtaining answers to these questions--an acceptable-risk means of evaluating the consequences of the proposed changes.

2. Scope

The scope of this effort has been deliberately limited to the major changes that have been proposed in the system. By and large, these have to do with regulatory policy rather than procedure. . . with whether we should regulate air transportation (or how much we should regulate it) rather than with how to regulate it. Many procedural changes in the regulatory process have been recommended by both deregulationists and proregulationists. The Board has recognized the need to address procedural issues and recently undertook a comprehensive review of this problem.[1]

This effort addresses the fundamental questions being raised regarding regulatory policy, and is therefore concerned with whether and what major policy changes should be made.

Within the area of policy, the scope has been further limited to consideration of changes proposed in the direction of deregulation, or less regulation, of the system. However, there is a substantial body of opinion to suggest that what the system needs is more regulation rather than less.

Much of the force of the deregulation argument stems from the belief that regulation is productive only for industries that are "natural monopolies" by virtue of (i) their size and importance to the growth of the total economy, (ii) economies

[1] On June 21, 1975, the Board announced that it would establish, consistent with the Federal Advisory Committee Act, the Board Advisory Committee on Procedural Reforms, a diverse group from outside government to analyze Board administrative procedures and make recommendations to the Board.

of scale, and (iii) the fact that competition does not work well in the industry. Public utilities fit this description, but air carriers do not. However, there are many people who believe that the air transportation industry comes close enough to this description to warrant consideration as a utility, and that it would be more efficient if it were regulated as a utility.

What this would mean essentially is that the Board, which now regulates price, entry, and route awards, would be authorized to extend its control over the supply side of the equation by regulating schedule frequency. Many see this as a logical and simple way to handle the problem of overcapacity and low load factors.

It has also been suggested that the Board should deal with the criticism that the carriers compete unproductively on service, by regulating on-board service: food and liquor service, seat pitch, and so forth. A more directive approach toward carrier mergers and route rationalization is also urged--even surveillance of the efficiency of carrier management and limitation of equipment purchases.

It would be unwise to overlook the potential productivity of such changes as these, and an experiment might well be conducted at some future date. However, changes in this direction, while potentially interesting and rewarding to explore, are not the subject of this effort.

D. Identification of the National Interest Objectives in Domestic Air Transportation

As noted above, the pivotal point on which the issue of regulation versus deregulation turns is, "Which system best serves the national interest?" However, to make this determination, it is first necessary to determine how the national interest has been defined--what the objectives established for domestic commercial aviation are.

This is not an easy task. Definition has come from many sources over the years, and there is considerable controversy about how the objectives should be interpreted and, indeed, whether the traditional objectives are still suitable. Nevertheless,

an effort to define and interpret the national interest objectives will be made here, drawing on a similar effort completed recently as part of a study of U. S. international air policy. [1]

1. Sources of National Interest Objectives

The primary source of national interest objectives in domestic aviation is the legislation established by the Congress--principally the Federal Aviation Act of 1958. However, statements of national policy issued by the executive branch and the decisions of the Board have assumed the force of common law in defining objectives. And other parties at interest have stated or assumed positions for so long that they have all but been accepted as fact. Thus, there are several sources of national interest objectives:

- Pronouncements of the legislative branch; for example, the Federal Aviation Act of 1958.
- Statements of the executive branch; for example, President Ford's Regulatory Summit Statement.
- Independent boards and agencies; for example, the Civil Aeronautics Board.
- Nongovernmental organizations and individuals; for example, the academic community, industry spokesmen, and public interest groups.

The objectives discussed here are drawn from these sources. They fall into two categories:

- Basic Objectives, which identify the end items that would provide a fundamental service to the country.
- Supportive Objectives, which describe the form that the domestic air transportation system (as derived from the basic objectives) will take.

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[1] Harbridge House, Inc., Simat, Helliesen & Eichner, Inc., and Kirkland, Ellis & Rowe, U.S. International Aviation Policy at the Crossroads, Vols. I and II, Boston, February 1975.

2. Basic Objectives Established for Commercial Air Transportation

- Respond to national defense needs.
- Respond to (needs of) domestic commerce.
- Respond to Postal Service needs.
- Foster just and reasonable fares.
- Foster system safety.
- Help the environment.
- Foster efficient use of energy.
- Respond to public demand
- Foster development of aeronautics.
- Foster employment.

3. Supportive Objectives Established for Commercial Air Transportation

- Allow equal opportunity for all carriers to compete.
- Promote competition among carriers.
- Foster sound economic conditions.
- Foster economy and efficiency of carriers.

4. Problems with the Objectives

While the foregoing are objectives currently in force, they need some definition and interpretation if they are to be useful in measuring the responsiveness of the system to the national interest.

For example, the Federal Aviation Act of 1958 states that the system will respond to the needs of the Postal Service. However, it does not state what a satisfactory response is. Is it low cost? Is it scheduled service? Is it a system covering all markets?

There are also conflicts among objectives. For example, under the existing rate making approach, the objective

of low and lower fares can be achieved only by lower total system costs. But where should costs be cut?

As another example, a large civil air fleet, in the interest of national defense,is clearly a worthwhile goal. If, however, as some would argue, minimum average fares by reason of maximum possible load factors becomes the goal, a lesser size, more utilized fleet may be the likely result.

Recent changes in national and world conditions have raised further doubts about what the stated or implied objectives actually mean in terms of, for example:

- Energy conservation.
- Environmental considerations.
- Scheduled service versus plane load service.
- Cross-subsidization of low density markets by high-density markets.
- Low and lower fares.

As noted above, deregulators consider the conflict among established national interest objectives an obstacle to developing an efficient system within the current structure. But their dissatisfaction is even more fundamental than this. They maintain that the fundamental and overriding objective for air transportation should be maximum economic efficiency. They do not disregard such goals as Postal Service needs or environmental concerns. But they believe that these goals could be met adequately, with much less government control, in a system that was devoted to achieving economic efficiency. They maintain that other goals--just and reasonable fares, competition, and so on--would be achieved far more successfully in such a system. Proregulators disagree strongly with this view.

In the final analysis, the kind of system--and regulatory structure--we have must be the one that supports the national interest objectives better than any other. Thus, while reexamination may be necessary, an effort has been made here to interpret the current objectives in terms of system performance. This interpretation is shown in Figure 1. The table states the

FIGURE 1
THE NATIONAL INTEREST OBJECTIVES DEFINED

OBJECTIVE (1)	SOURCE (2)	WHICH MEANS (3)	HOW MEASURED (4)
BASIC OBJECTIVES			
1. Respond to National Defense Needs	--CAA of 1938 --FAA of 1958	--Long-range cargo and passenger aircraft available for emergencies and war situations.	--Number and type of aircraft in use.
2. Respond to Postal Service Needs	--CAA of 1938 --FAA of 1958	--Reasonable delivery time and reliable system for mail.	--Service penetration, passenger and all-cargo.
		--Reasonable rates.	--Average yields. --Degree of carrier competition.
3. Respond to Domestic Commerce	--CAA of 1938 --FAA of 1958	--Regularly scheduled passenger and cargo service between geographic areas and co-terminals.	--Service penetration, passenger and all-cargo. --Load factors (scheduled and all-cargo).
		--Support of tourist industry.	--Service penetration, passenger. --Load factors (scheduled and all-cargo). --Increase in traffic (scheduled, charter, and all-cargo).
4. Just and Reasonable Fares	--FAA of 1958	--No discrimination between classes of travelers.	--Average yields. --Fare structure discrimination.
		--No cross-subsidization between geographic areas.	--Average yields. --Fare structure discrimination.
		--Reasonable load factors.	--Load factors.
		--No excess carrier profits.	--Carrier profitability.

FIGURE 1 (Cont'd)

OBJECTIVE (1)	SOURCE (2)	WHICH MEANS (3)	HOW MEASURED (4)
5. System Safety	--FAA of 1958	--No overloading of air traffic system.	--Carrier profitability. --Load factors.
		--No deterioration of aircraft maintenance and practices.	--Carrier profitability.
6. Help the Environment	--NEPA of 1970 --New legislation	--Promotion of new aircraft development and engine retrofits for cleaner and less noisy systems.	--Number and type of aircraft in use. --Carrier profitability.
		--Minimization of land-use needs (airports).	--Number and type of aircraft in use. --Load factors.
7. Energy Use	--Interviews --Current issue --FEAA of 1974	--Minimization of fuel needs.	--Total fuel consumed.
		--Optimization of fuel needs versus traffic.	--Fuel efficiency.
8. Respond to Public Demand	--FAA of 1958	--Meeting total demand for geographic areas and service - Point-to-point. - Nonstop. - Scheduled (F&Y). - Charter. - Behind and beyond.	--Service penetration, passenger and all-cargo (domestic). --Load factors. --Increase in traffic (scheduled, charter, and all-cargo).
		--At reasonable load factors.	--Load factors.
9. Development of Civil Aeronautics	--FAA of 1958	--Technological advancement.	--Number and type of aircraft in use.
10. Employment	--Full Employment Act of 1947	--Employment in U.S. air transportation industry.	--Number of U.S. citizens employed (carriers and supply and support industries).

FIGURE 1 (Cont'd)

OBJECTIVE (1)	SOURCE (2)	WHICH MEANS (3)	HOW MEASURED (4)
SUPPORTIVE OBJECTIVES			
A. Equal Opportunity for All Carriers to Compete	--FAA of 1958	--No unjust discrimination. --No undue preferences or advantages. --No unfair or destructive competition.	--Market share. --Carrier profitability.
B. Foster Sound Economic Conditions	--FAA of 1958	--Scheduled, supplemental, and all-cargo carriers. --Total demand for aircraft.	--Carrier profitability.
C. Competition Among Carriers	--FAA of 1958	--More than one carrier per market.	--Degree of carrier competition. --Competitive balance.
D. Foster Economy and Efficiency of Carriers	--FAA of 1958 --1972 FAA Amendments	--Lowest fares consistent with service. --No excess carrier profits.	--Load factors. --Carrier profitability. --Average yields.

objective (Column 1); source (Column 2); what it means (our definition, Column 3); and how one could measure the responsiveness of the system to the objective (Column 4).

E. How the Industry Is Regulated

1. Background

Regulation of domestic air carriers has been a reality since the Air Commerce Act of 1926, which mandated registered aircraft, certificated pilots, lighted civil airways and navigation beacons, and penalties for noncompliance. In these early days of air transportation, such regulation responded in part to the government's program of air mail subsidy and in part to the plight of carriers whose operating costs for providing air service far outweighed their revenues.

As the air industry grew over the years, however, economic and safety regulations became more encompassing and more reflective of the related social, political, and military needs of the U.S. community. As the industry became more sophisticated, the air network increased, competition grew, and the regulatory emphasis shifted from the impact of single operators to the overall impact of the industry group.

Through the 1938 Civil Aeronautics Act, Congress set up the Civil Aeronautics Authority, an administrative arm for the authority, and the Air Safety Board. Under the provisions of this act, power was granted to determine route entry, to regulate carrier rates, and to develop and maintain safety standards. In 1940, the responsibilities of the Authority and the Board were transferred to the Civil Aeronautics Board, and Board and administrative powers became the Civil Aeronautics Administration of the Department of Commerce. By virtue of the 1938 Act, 16 operators were certificated and given what have come to be called "grandfather rights" --rights and to some extent obligations to serve the routes they were then serving. Over time, this number has contracted to the present 10 domestic trunks (plus Pan American), and many local service carriers (now 9), plus specialty (all-cargo and charter) carriers.

Under the Federal Aviation Act of 1958, Congress established a Federal Aviation Agency with responsibility for safety regulation and maintenance of federal airport-airway support functions. In 1966, Congress set up the Department of Transportation which included the renamed Federal Aviation Administration. Today, the air industry is one of the most closely regulated industries in the United States, falling under the surveillance of the Civil Aeronautics Board, Department of Transportation, Federal Aviation Administration, and Department of Justice.

2. Economic Regulation (Civil Aeronautics Board)

The Board, which includes five members appointed by the President and confirmed by the Senate, is the principal economic regulator of the domestic air industry. But unlike other regulatory agencies, Congress has also given it a promotional responsibility. For instance, the Board can promote the welfare of the industry through direct subsidies to airlines. It can also promote the welfare of the airline community through the use of measures which encourage and develop economic, efficient, competitive, and safe service. Specifically, according to the Federal Aviation Act, this responsibility includes:

- The encouragement and development of an air-transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense.

- The regulation of air transportation in a manner which recognizes and preserves the inherent advantages of, assures the highest degree of safety in, and fosters sound economic conditions in, such transportation, and improves the relations between, and coordinates transportation by, air carriers.

- The promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices.

The Board's economic regulatory responsibilities and powers extend to seven key areas:

a. Rate-Making (Fares)

The Board determines and maintains what it construes to be "just and reasonable" individual and joint fares. Its power extends to approval and disapproval of specific rate increases and decreases. In making such determinations, the Board is guided by factors which include the impact of rates on traffic movement, the public need for low-cost transportation, the quality of service, the advantages or disadvantages of the rates, and the economic need of a carrier for such rates.

b. Entry/Exit Competition

The Board authorizes both the routes and the manner in which an airline may operate interstate service. This means that it decides which airlines will receive certificates for service, and establishes what points will be served and how many stops will be made.

The Board can permit carriers to reduce or discontinue service. It can also require carriers to continue service on unprofitable routes if such performance is in the public interest. In this sense, it controls new business, competition, and abandonment. The Board is also empowered to control "destructive competition"; that is, competition which is based on unfair tactics and which is not in the public interest. The Board may not restrict a carrier's right to add or change schedules, equipment, accommodations, or facilities, except in certain limited situations.

c. Mergers

The Board must approve all mergers and acquisitions between or involving regulated air carriers. In these cases, it is guided by the public interest, the need to avoid monopolies, and the impact the merger would have on other (nonparty) carriers. In certain cases, the Board may confer immunity from antitrust laws.

d. Intercarrier Agreements

The Board must review all intercarrier agreements (such as interline agreements on airport procedures and capacity reduction agreements). It disapproves any agreement not in the

public interest. However, any agreement which receives approval also automatically receives immunity from the antitrust laws.

e. Service Quality

While the Board's direct impact on service quality is limited, it exerts a de facto influence by virtue of the fare structures that it approves.

In carrying out its regulatory responsibilities, the Board employs a broad range of procedures covering situations that range from immediate, informal decisions to large-scale, prolonged hearings or investigations. It may initiate a "rule-making proceeding," inviting comments from interested parties. Other matters necessitate a hearing before an administrative law judge.

3. Safety Regulation (The Department of Transportation)

Under the Federal Aviation Act of 1968, the Secretary of Transportation has responsibility for various public interest objectives (in addition to the specific responsibilities of the FAA) especially with regard to safety.

a. Federal Aviation Administration

The FAA sets and maintains air safety standards. This is accomplished through a network of regulation and control functions throughout the United States by which it maintains surveillance of the civil air fleet, ensures the certification and registration of aircraft and pilots, encourages the development of improved safety measures, maintains and regulates air traffic facilities, and administers the airport-airway program. While FAA controls affect most aspects of airline operation, the agency's objective (safety) is clearly defined and less open to dispute than the Board's function.

b. National Transportation Safety Board

The NTSB, an agency within DOT, reports directly to Congress. One of its principal functions is the investigation of air accidents and, where necessary, the prosecution of related charges.

4. Other Regulations

The industry is also affected by the Sherman and Clayton Acts. In this regard, the Department of Justice has issued guidelines for any industry mergers; however, due to the Board's control of the air industry's relationship to such antitrust activities, its role is mainly an advisory one. (In 1971, the Department of Transportation also developed a set of guidelines which are somewhat at variance with those of the Department of Justice.)

F. Overview of the Industry

The air transportation industry is too large and complex to be analyzed in a few pages. However, some highlights on major industry attributes may provide perspective on the issues encompassed in the regulatory debate.

1. Historical Performance (1960 - 1974)

Table 1 summarizes the performance of the certificated route domestic airline industry for the period since 1960 (the 10 domestic trunk carriers and 9 local service carriers). Traffic growth improved from the late 1950's, rising to an annualized rate of about 20 percent for the 1965 to 1968 period. Traffic declined in 1970 mirroring the general economic downturn but improved yearly thereafter, until 1975.

The operating revenue data reflects the widespread use of discount fares during the 1960's. Increasing costs, lower productivity, and traffic slowdowns hurt industry profits in the late 1960's, leading to CAB approval of requests for increased fares in 1969 and 1971. Operating revenues for the 12 months ended 30 September 1974 increased over 18 percent from the previous year's total. Revenues for the first five months of 1975 show a sizable decline.

TABLE 1
AIRLINE TRAFFIC, INVESTMENT, AND REVENUE IN
TOTAL U.S. DOMESTIC OPERATIONS, 1960 - 1974
(Millions)

Year	Total Revenue Ton-Miles	Regulatory Investment (Dollars)	Total Operating Revenue (Dollars)	Return on Investment (%)	Year-to-Year Percentage Change		
					Revenue Ton-Miles	Total Operating Revenue	Return on Investment (Points)
1960	3,733	NA	2,178	2.92			
1961	3,899	NA	2,305	1.24	4.4%	5.8%	-1.68%
1962	4,441	2,115	2,589	4.11	13.9	12.3	2.87
1963	4,831	2,076	2,790		8.8	7.7	0.83
1964	5,601	2,137	3,169	9.39	15.9	12.0	4.45
1965	6,774	2,502	3,691	11.31	20.9	16.4	1.92
1966	8,054	3,141	4,171	10.07	18.9	13.0	-1.24
1967	9,982	4,164	4,981	6.39	23.9	19.4	-3.68
1968	11,462	5,191	5,691	4.32	14.8	14.3	-2.07
1969*	13,943	6,104	6,936	3.74	21.6	21.9	-0.58
1970*	13,877	6,037	7,180	1.29	- .4	3.4	-2.45
1971*	14,142	6,332	7,753	3.73	1.9	8.0	2.44
1972*	15,585	6,497	8,652	6.26	1.9	11.6	2.53
1973*	16,707	7,821**	9,694	6.29	7.2	12.0	0.03
1974*	16,999	8,178**	11,545	9.05	1.7	19.1	2.76

*Fifty-state basis.

**Corporate investment.

Sources: U.S. Civil Aeronautics Board, Handbook of Airline Statistics, 1973 edition (1974), pp. 12, 69, 411, and 417.
U.S. Civil Aeronautics Board, Air Carrier Traffic Statistics, December 1974, p. 4.
U.S. Civil Aeronautics Board, Air Carrier Financial Statistics, December 1974, p. 2.

2. Load Factors

TABLE 2
TOTAL REVENUE PASSENGER LOAD FACTOR--
DOMESTIC OPERATIONS SCHEDULED SERVICE (%)

Year	Domestic Trunks	Local Service
1974	55.7	52.7
1973	51.9	48.7
1972	52.4	49.2
1971	48.3	45.3
1970	49.3	43.6

Source: U. S. Civil Aeronautics Board, Air Carrier Traffic Statistics, December 1974, pp. 6 and 7.
U. S. Civil Aeronautics Board, Handbook of Airline Statistics, 1973, p. 26.

Passenger load factors are a measure of actual capacity utilization of carrier equipment. As the load factor approaches 100 percent revenues increase, but meeting demands for peak periods becomes a problem. The 1974 revenue passenger load factors show an increase after the drop in 1973 percentages. The local service carriers have exhibited a steadier pattern of increase over the period (explained in the following section).

3. Market Structure

The domestic market includes more than 59,000 city pairs. However, as Table 3 shows, traffic is very highly concentrated--with 30.7 percent of all passengers and 34.6 percent of all revenue passenger-miles being generated in the top 100 city pairs, which represent only .17 percent of the total. The top 1,000 markets, which represent only 1.7 percent of the number of city pairs served, account for 70.6 percent of the passengers and 71.1 percent of revenue passenger miles. Therefore,

when the low-density markets are discussed, a great many city pairs are involved, but relatively few revenue passenger miles.

TABLE 3
TRAFFIC CONCENTRATION BY CITY PAIRS

City Pairs	Number of Passengers	Revenue Passenger Miles (RPM's)
Top 100	30.7%	34.6%
Top 200	41.3	44.7
300	48.3	51.3
400	53.5	56.1
500	57.7	59.8
1,000	70.6	71.1

Relative growth patterns are also interesting to note. The pattern of airline market growth for 1968 to 1972 was studied by Boeing and presented in the October 28, 1974, issue of Aviation Week & Space Technology. The chart, shown below, segregates the highest growth city patterns (cross-hatched blocks); these are the "medium-density, medium-range markets. Growth has been lower in the higher-density city pairs and longer ranges, like transcontinental routes."

TABLE 4
RELATIVE GROWTH PATTERNS

Market Size*		Distance (Statute Miles) 0-299	300-799	800-1,299	1,300-1,899	1,900-2,700	TOTAL
0-99	GROWTH (%)	(11)	35	84	62	45	15
	% OF TRAFFIC	6	5	2	1	1	15
	NO. OF CITY PAIRS* *	6,557	8,404	3,878	1,989	1,547	22,375
100-199	GROWTH (%)	13	36	73	45	3	29
	% OF TRAFFIC	5	4	2	1	1	13
	NO. OF CITY PAIRS* *	140	113	60	27	16	356
200-299	GROWTH (%)	12	40	84	25	6	30
	% OF TRAFFIC	3	3	1	1	-	8
	NO. OF CITY PAIRS**	57	62	25	14	6	162
300-599	GROWTH (%)	11	25	48	19	15	21
	% OF TRAFFIC	7	7	3	1	1	19
	NO. OF CITY PAIRS**	76	72	33	7	10	198
600-999	GROWTH (%)	2	22	28	16	19	16
	% OF TRAFFIC	4	6	3	1	1	15
	NO. OF CITY PAIRS**	23	33	16	9	6	87
1,000+	GROWTH (%)	2	10	17	2	5	7
	% OF TRAFFIC	10	12	4	2	2	30
	NO. OF CITY PAIRS**	22	29	11	6	4	72
TOTAL	GROWTH (%)	3	22	41	19	13	16
	% OF TRAFFIC	35	37	15	7	6	100
	NO. OF CITY PAIRS**	6,875	8,713	4,021	2,052	1,589	23,250

* DAILY COUPON PASSENGER EACH WAY, 1972
** DOMESTIC CITY PAIRS WITH O&D TRAFFIC (OF THESE, 4,118 HAD NONSTOP SERVICE IN SEPTEMBER 1972)

Essentially, the 72 highest density city pairs have over 1,000 coupon passengers daily and represent 30 percent of traffic. The group with the next most dense cumulative involves 162 city pairs or 7/10 of a percent of the studied city pairs, but handles 45 percent of the daily traffic. The smallest density city-pair markets (those with less than 100 passengers daily) account for only 15 percent of total traffic, but involve over 96 percent of the city pairs.

Today, close to 77 percent of all domestic trunk city-pair markets have at least two-carrier competition. In 1950, when the Board embarked on its policy of increasing competition throughout the system, only 50 percent had at least two-carrier competition.

PART II. ANTI- AND PRO-REGULATION POSITIONS/HYPOTHESES

A. Introduction

This section summarizes the positions that have been taken on both sides of the regulation debate, organizing them according to the major issues involved. The positions have been drawn from several sources: books, articles, speeches, and interviews with carrier executives and representatives of government (Department of Transportation, Department of Justice, the Council of Economic Advisers, and the Civil Aeronautics Board). Summaries such as this often tend to flatten out sharp differences, and distinctive views expressed by individuals may not be reflected here. However, it is believed that this section represents the principal arguments on both sides of the issues.

B. The Anti-Regulation Position

1. Overview

The deregulators (as represented by a number of economists, and DOJ, CEA, and to some extent DOT) are opposed to economic regulation except in the unusual situation where the characteristics of an industry justify it (for example, utilities). Therefore, they are critical of the existing regulatory structure in air transportation and the role the Board has taken. They maintain that maximum economic competition is necessary to produce maximum efficiency and economy in the air industry, and in the economy generally. They contend that by restricting entry and exit, regulating fares, and permitting carrier agreements, the Board has encouraged the development of an inefficient, cost-inflating system, further inflated by the costs incurred by the regulatory process itself. They conclude that this system is not in the best national interest.

Deregulators argue that promoting maximum economic efficiency should be the main goal of the Board. If it is not, the Board's mission should be clarified and justified. They favor letting the carriers work on their own toward achieving economic efficiency--and letting whatever system develops in the process become the national system. Thus they would eliminate regulatory

constraints, retaining government in a promotional and supervisory role. The deregulators disagree as to the timing of these changes, however; some argue for immediate deregulation, others for a more gradual approach.

2. Pricing

The deregulators maintain that the Board's restrictions on price flexibility have eliminated effective competition and caused the carriers to compete largely on the basis of scheduling frequency, thereby resulting in:

- Overcapacity, leading to low load factors and high, rigid price levels.
- An inadequate variety of services.
- Discrimination among classes of travelers.

This environment, they contend, produces noncompetitive fares that have been set at a level significantly higher (estimates range from 30 to 100 percent higher) than would be charged in an unregulated environment, particularly on densely traveled and long-distance routes.

Although deregulators advocate greater freedom of pricing, they do not believe an open market is possible unless we also have freedom of entry and exit. They claim that relaxation of price and product controls, without relaxation of entry controls, would result in:

- Greater variety in product rivalry, with reduced emphasis on new aircraft and product strategy.
- More price variability in particular city-pair markets, but higher fares in the long run.
- A higher aggregate rate of return, but questionable new performance gains.

3. Entry/Exit

Deregulators are concerned about what they contend amounts to a closed entry situation in the industry. They cite the fact that no new trunk carriers have been certificated since regulation began, although the number of trunk carriers has contracted (through merger). They claim that the Board's control of entry and exit:

- Eliminates normal economic pressure to reduce costs.
- Protects inefficient firms and denies access to potentially more efficient carriers.
- Permits and encourages inefficient route structures and the inefficient utilization of equipment.
- Raises the costs of air travel.

Arguing for a completely open system, deregulators maintain that removing entry restrictions without lifting price and product restrictions would result in:

- Higher average costs, because of excess capacity and real or spurious product differentiation.
- Successive and rapid increases in prices as a result of cost increases.
- Abandonment of unprofitable service in thin markets.
- Guaranteed profits, though not excessive profits, for the carriers at all fare levels.

The deregulators concede that free entry and exit could have some negative consequences as well, principally:

- Some degradation in service quality--particularly in the frequency of flights in certain markets.

- Loss or reduction of service in some marginal low-density and short-haul routes, which could create a requirement for more direct government subsidy.

However, they consider these consequences supportable in the short run, maintaining that they would lead to long-term improvements in the economic efficiency of the system. In addition, they say, it is probable that specialized carriers would enter marginal markets to replace existing traditional carriers.

4. Cross-Subsidy

The deregulators tend to minimize the cross-subsidy issue. In their view, the carriers have been allowed to abandon service in marginal markets for some time--as part of the Board's route-strengthening policies. Therefore, they say, the amount of internal subsidization (of unprofitable or less profitable routes by more profitable routes) that exists is much less than the carriers claim. Consequently, there would be very little further abandonment of service under relaxed entry and exit rules.

Deregulators do not dismiss the impact of internal cross-subsidization entirely. They concede that, without it, fares in marginal markets might increase, and that there might be some decline in service. But they assert that market forces would hold these changes to acceptable levels. In addition, they claim that many of the routes which the carriers represent as unprofitable are, in fact, at least marginally profitable because variable costs are exceeded by revenues or because they make a contribution, as feeder lines, to the profitability of major routes.

As noted above, deregulators are of the opinion that if existing service by a trunk or local-service carrier were abandoned in a freer entry and exit environment, specialized carriers (including scheduled air taxi service) would be available to fill the gap. In fact, they claim that the public would consider this service superior to the service provided by certificated carriers in markets they consider marginal.

The deregulators grant that some additional direct subsidy payments might be necessary in those markets where air taxis did not wish to provide service on an unsubsidized basis.

But they contend that the total amount of local service subsidy would be substantially reduced and that the overall quality of service to these markets, measured essentially by the frequency of service available, would rise. Moreover, total system costs--private plus public--would be reduced, because of the more efficient matching of equipment to routes and markets served.

5. Competition

The deregulators do not worry about the possibility of too much competition in the system. With open or relaxed entry, they claim that price and service competition would increase merely to desirable levels. This would serve to substantially reduce fares in denser markets and to provide the traveler with more price/quality options. (It is conceded, however, that greater competition could increase costs, by increasing the carriers' sales and promotion expenses.)

Destructive competition would not occur since:

- Management's profit-maximization goals would work against it.
- The carriers have only limited equipment resources to deploy in a given market.
- The carriers would continue to recognize their mutual interdependence.

With free entry, deregulators see an end to monopoly service in many markets, although it might continue in certain thin markets. They believe that the ever-present threat of entry by another carrier would preclude monopolistic pricing or deterioration of service.

6. Load Factors

The deregulators maintain that low average load factors (ranging from 48 to 56 percent in the past 10 years) are a function of (i) demand-related rather than cost-determined fares and (ii) the carriers' reliance on scheduling competition, which they claim leads to excess capacity.

Although a 55 percent load factor was established as satisfactory in the Board's Domestic Passenger Fare Investigation, deregulators now consider it too low. They claim that with free pricing and free entry, however, both free market competitive pressures and the profit maximization goals of carrier management will reduce fares. Load factors would then rise as demand for more attractively priced air travel increases. Thus over the long term fares and load factors would reach an optimal equilibrium.

7. Scheduled Service

The deregulators see greater price and service flexibility leading to many more low-cost options for the public--generally in the direction of mass travel and including other than scheduled service. They consider this to be very desirable, and do not appear to share the concern of the proregulators that this shift would seriously degrade scheduled service as we now know it.

8. Stability

The deregulators do not believe that the changes they recommend would cause long-term instability in the system. They are prepared to accept any short-term dislocations that occur. As they see it, the present air system is characterized by inefficient operating and marketing practices, as well as by the inefficient deployment of equipment. With free entry and free pricing, there might be some initial dislocation, including loss of service in some areas and perhaps some carrier financial failure. But no major instability would result, since inefficient carriers would be replaced by more efficient firms.

Deregulators claim that in the longer term the pressures of competition, plus the freedom to enter or exit from markets at will, would make the remaining carriers more efficient. Moreover, the system as a whole would be strengthened by the emergence of distinct classes of carriers that would specialize in classes of service--for example, long-haul, intermediate-haul, and short-haul--or scheduled and nonscheduled. The carriers would purchase and deploy equipment designed specifically for these services, rather than maintain inefficient fleets as they do now. The deregulators also believe that more rational route structures would evolve.

C. The Pro-Regulation Position

1. Overview

Those who support the status quo oppose major changes to the system even while admitting that it has its flaws. They believe that regulation is essential to the maintenance of the comprehensive, integrated air system we have achieved, and that open competition and free pricing would lead to predatory tactics, loss of service, and ultimately, the collapse of the system. They claim that the real issue is whether the country wants a comprehensive nationwide system of dependable air service.

2. Pricing

The proregulators insist that airline fares must be judged by the value of the total air transport system, which provides safe, reliable, high-quality service to the vast majority of communities in the country. Viewed in this context, they assert that air travel is one of the best values available to the public. And they believe that the public perceives it as such--as the growth of the industry demonstrates.

Proregulators point out that air fares are set on a system-average basis--which is the only way they can be established in a massive, complex, and interdependent network such as we have and need. They contend that fares are non-discriminatory and, to the extent possible, cost related. However, they are not rigid. Depending upon the type of service he wishes to purchase, and his flexibility about travel time, a prospective passenger can choose from a wide variety of fares at substantial discounts from normal fares.

If anything, proregulators claim, air fares are too low and are probably lower overall under the present system than they would be if there were no price regulation. They point out that the industry has not achieved excessive profits under regulation, and that air fares have increased less than most other services available to the public. Fares have increased substantially less than airline costs--particularly the two major cost components, labor and fuel. They note that U.S. air fares are substantially lower than those charged for comparable levels of service in other countries.

The proregulators maintain that the lower fares which deregulators say could be achieved are based upon unrealistically high load factors. Under a totally deregulated system, where carriers would not be providing a comprehensive network of service, fares could be reduced in certain very dense markets. But they claim that these reductions would be obtained only in the short run, at the cost of dramatically higher fares in other, less dense markets, and with extremely unstable fares.

Some proregulators would not be adverse to somewhat more pricing flexibility than is permitted now, perhaps a zone of reasonableness pricing in a ± 5 to 10 percent range. Others, however, believe that with this approach most fares would move to the top of the zone rather than the bottom.

3. Entry/Exit

The proregulators are opposed to free entry and exit, contending that it could destroy the present system, which is founded on the carriers' recognition of (i) their interdependence and (ii) their responsibility to serve all the public.

As directed by the Congress, they point out, the mission of the present system is to meet the air transportation needs of the country as a whole, not simply its most populous cities or areas. Therefore the carriers must serve low-density markets as well as the more attractive high-density markets. If carriers were free to enter and exit from markets at will, many of these low-density markets would lose some or all of their air service--at least service by certificated carriers. Because of the interdependence of the system--including the important function that some marginal markets play in feeding passengers to major markets--the exact number of cities that would be dropped can only be estimated. But estimates range from a low of 10 percent to as high as 30 percent. This, it is said, is contrary to the expressed wish of these communities, which want better service, not necessarily less expensive service.

It is claimed that in an open, highly competitive system, the efficient but complex process of ticketing, baggage-handling, passenger transfers, and so on, that we now have would fail. Even if the carriers could accommodate the change, airport facilities could not. Airport facilities in dense markets, where additional

carriers would presumably enter, would be overtaxed. In effect, the managers of these airports would be regulating entry according to their individual priorities. Facilities in other markets would be underutilized or abandoned. The result would be chaos and deterioration of the system. In addition, there would be the additional expense of building new airport facilities in the very locations where environmentalists are now questioning their viability.

Proregulators do not agree with the contention that the present system is a closed one. Although no new trunk carriers have been certificated, they claim that there has been substantial new entry in city-pair markets in the form of extensive route awards, coupled with the growth of the "small seven" trunks and particularly the local service carriers, many of whom are approaching trunk carrier size.

4. Cross-Subsidy

Many proregulators claim that the cross-subsidization of weak routes by fares from stronger routes is critical to the functioning of the system, but would not survive in a changed system. They point out that airlines are economic entities with responsibilities to their debt holders and stockholders to maximize profits within the restrictions of their certificates. The willingness of carriers to serve unprofitable or only marginally profitable markets depends in part on their ability to cross-subsidize them with profits generated elsewhere in their systems. If profits decline because of new entry and increased competition in these markets, cross-subsidization will cease, and many cities could be expected to lose certificated service.

Related to the cross-subsidy argument is the view that service in many low-density markets is profitable only on an incremental system basis because of the traffic "feed" from those markets into high-density connecting services--the likely candidates for increased competition in a deregulated system. Proregulators believe that a deregulated system would destroy the economics of these subsystems, and service to low-density markets would shrink or be lost altogether. They predict that the resulting cost to the air system as a whole, and particularly to the adversely affected cities, will be incalculable. For example, the economies of these cities will decline because commercial firms will hesitate to locate or remain there without reliable, reasonably priced passenger and cargo service.

The proregulators contend that is not realistic to think that the air service these communities would lose could be replaced by air taxis or other specialist carriers. There are many reliable and efficient air taxi operators, but their overall record of stability and safety cannot compare with that of the scheduled carriers. Even if they were willing and able to provide the service, which is questionable, their quality could be so marginal that many communities would reject them, and resort to the political process to develop other transportation alternatives. Moreover, most of those marginal communities that retained a minimum level of scheduled service or accepted air taxi service would find the fares prohibitively high. Either the community itself would be forced to subsidize the service or, more likely, the federal government would be asked to do so. In addition to all the other inequities that deregulation would create, the taxpayer would be forced to pay the subsidies the airlines, or certain classes of their travelers, are paying now.

5. Competition

If anything, proregulators claim, there is too much competition in the system, not too little--as low earnings demonstrate. They point out that under a concerted effort by the Board to create more competition, more than 75 percent of all domestic trunk city-pair markets in the country are now served by at least two carriers. The denser markets are served by three or four carriers, although experience has shown that little if any improvement in load factors is obtained by the addition of a third or fourth carrier.

Given the present economics of the system, say the proregulators, it is reasonable to presume that freedom of entry would increase competition--not in the low-density, unprofitable markets--but largely in the high-density markets, where it is unnecessary. With freedom of pricing accompanying freedom of entry, the predictable results would be destructive competition and predatory pricing in the short term and widespread carrier failure and system instability in the long term. They construct the following series of developments as likely to occur:

- A new carrier would enter the market and, to win market share, would lower its fares.

- All the other carriers would follow suit, whereupon the new carrier would lower fares again, whereupon the other carriers would do the same.

- The process would continue with all carriers incurring losses until the weaker carriers were forced out of the market. The strongest carrier, now enjoying a monopoly position, would gradually increase fares again to a profitable level.

- Without competition and without price regulation, the fares of the remaining carrier would rise above the original levels. The carrier would naturally have a monopolistic market share.

- By the time the market once again looked inviting to a competitor, the monopoly carrier's position would be stronger than ever. Thus, when the fare-lowering process began again, this carrier would be in a better position to force fares down to a level new competitors could not match, and thus the monopolistic situation could, and probably would, continue.

- The final result would be periods of competition, with lower but unstable fares, alternating with periods of monopolistically higher fares.

Ultimately, the proregulators claim, these developments--duplicated in major markets across the country--would lead to (i) the emergence of three or four giant carriers servicing the most profitable markets and (ii) a larger group of small carriers providing marginal service for marginal profits in local markets the large carriers did not want to serve.

6. Load Factors

Proregulators agree that system-wide load factors are sometimes lower than they should be. They insist, however, that it is unrealistic to believe that load factors could reach the 60 to 80 percent levels predicted by those favoring deregulation without (i) serious reduction of quality in dense markets and (ii) loss of service to many marginal markets. This is because

load factors are average figures--they represent the average amount of available, consumed, and unused capacity in the whole system. This includes:

- Dense markets, with load factors already well above 60 percent, and thin markets, with load factors at 20 or 30 percent.

- Peak travel times, when most people want air service, and off-peak times, when very few people want air service.

Given these conditions, plus the fact that air service must be consumed when it is available, operations at the load factors contemplated by the deregulators would necessarily involve:

- Reduction of flight availability in dense markets. This would make it all but impossible to obtain a seat at peak times unless reservations were made far in advance, since load factors are already very high in those markets.

- Elimination or drastic curtailment of service in these markets.

This severe decline in service availability and quality, they warn, is the price to be paid for obtaining load factors significantly higher than those found today.

7. Scheduled Service

Proregulators dismiss predictions that freer entry and greater pricing and service flexibility would improve the system by making low-cost mass-travel options such as ITC's available to those who want them. They claim that this fails to take sufficient account of the effect the various kinds of non-scheduled service would have on scheduled service and the system as a whole.

Under the present system, they claim, those travelers who can be flexible about departure times already have many low-cost options open to them. But these options

are made available on scheduled flights. They may divert some higher fares but they do not divert scheduled traffic. However, the introduction of--for example-- widely available ITC's would divert much traffic from scheduled service, which would have to be cut back appreciably.

Proregulators point out that scheduled service is what makes it possible for a passenger to get from one point to another at approximately the time he wants to--and, more important than that, to know in advance when he can leave and when he will arrive. Our economy depends heavily on the availability of this service, which permits firms to do business anywhere in the country.

8. Stability

As the proregulators see it, many of the conditions that deregulators criticize in the present system are the inescapable costs that must be paid for a stable system offering stable service at stable prices. The potential cost of a deregulated system would be the loss of much of this stability. It is claimed that anti-regulators seriously underestimate the chaos that would accompany radical changes. They do not understand the complexity and delicate balance of the system's interdependence or the balance that has been achieved between the airlines' competitive profit-maximizing instincts and the responsibilities laid on them by the certificates they receive as regulated carriers.

D. Major Hypotheses Developed from These Positions

The following hypotheses have been developed as to the impact of relaxation of price and service restraints and entry and exit controls.

Anti-Regulation	Pro-Regulation
Increased competition would foster much more price rivalry, thus leading to lower average fares (in the denser markets at least).	Increased competition would encourage predatory pricing, thus leading to price wars and great instability in fares. Fares in high-density markets

Anti-Regulation	Pro-Regulation
	might be lower at some times but higher at other times, and fares in low-density markets would be much higher.
Monopoly service would end in many markets and fares would be lower in those that remain, since the threat of new entry would be sufficient to keep fares down.	More service monopolies would develop, with significantly higher fares in thin markets.
There would be a greater variety of price and service options in the major markets, although the average quality and availability of service might suffer some decline--particularly in the thin markets.	Three or four giant carriers would serve the major markets, a large group of smaller (local) carriers would provide low-quality service in less dense markets, and there would be no certificated service to many small markets.
The overall demand for air travel would increase, and load factors would rise, leading to still further fare reductions.	The demand for air travel would increase, particularly at peak travel times and in thin markets as service becomes less available.
Wasteful overcapacity would be reduced, as the need to compete solely on the basis of scheduling would be eliminated.	Overcapacity would increase in dense markets in the short term, and would be followed by service reductions in order to increase load factors.
Discretionary subsidization of travelers in thin markets by travelers in dense markets would be eliminated. Some loss of service in thin markets might result. However, air taxis or other specialized carriers would fill the gap	Service in unprofitable markets would be abandoned and there would be significant reductions of service in marginal markets with severe economic consequences for the communities and businesses involved. Air taxis would not fill the gap, and a

Anti-Regulation	Pro-Regulation
in most cases. Some additional direct (government) subsidy might be necessary. But this is preferable to cross-subsidization.	substantial increase in government subsidy would be necessary.
The economic efficiency of the total system would be increased by encouraging carrier specialization, permitting a more flexible allocation of resources among major markets, increasing downward pressure on costs, correcting seasonal imbalances, and encouraging a more rational route structure.	Scheduled service would decline significantly with severe consequences for the nation's economy and business in general as well as for the nonbusiness traveler, with related deterioration of interline services such as ticketing, baggage handling, passenger transfers, and so on.
The overall stability of the system and the profitability of the airlines would increase as inefficient carriers are replaced with more efficient carriers and the remaining carriers are forced to become more efficient.	There would be widespread instability in and deterioration of the system as a whole, including failures among present carriers and industry unemployment, and the possibility of ultimate nationalization as in the case of the foreign airlines and our own railroad system.

E. Existing Evidence in Support of the Major Anti-Regulation and Pro-Regulation Positions

As has been shown by the foregoing presentation of hypotheses, deregulators and proregulators have reached quite different conclusions about the consequences that can be expected from the various changes currently being proposed for the air transportation system.

Upon what kind of evidence do they base their conclusions? On the deregulation side, it is chiefly the performance of the intrastate systems in California and Texas (plus some modeling of less regulated or deregulated systems). On the

proregulation side, it is chiefly the performance of the existing interstate system as it functions today, plus comparisons with the systems of other countries and the intrastate systems as well.

1. The Anti-Regulation Evidence

a. The Intrastate Experience. There is a substantial body of written criticism on the anti-regulation side of the debate. But apart from data supporting arguments against economic regulation of industry in general, deregulators rely for hard data on the experience of two air systems in the United States not controlled by the Board. These are the California and Texas intrastate air systems, both of which are under the surveillance of state regulatory bodies. However, the regulatory system in Texas is less stringent than the interstate system. In California, the California Public Utilities Commission regulated neither entry nor minimum rates until 1965--although it did regulate maximum rates. Since 1965, however, the CPUC has been granting route protection to established carriers.

Deregulators maintain that the evidence in California and Texas shows clearly that the lightly regulated, intrastate service pattern is more advantageous for the traveling public. Primarily, fares are substantially less, averaging about two-thirds of interstate fares for comparable distances. This, they say, is the result of:

- A high degree of price competition among carriers.
- Greater productivity as measured, for example, by average annual operating revenues per employee ($22,200 for each employee of a certificated trunk carrier and $32,500 for each Pacific Southwest Airlines employee).
- Greater specialization of operations in terms of:

  --Type of aircraft (one type of aircraft used until recently).

-- Type of service (one class of service).

- Higher load factors and better equipment utilization, including an improved matching of equipment to the demands of the traveling public.

Deregulators contend that without the Board's restrictions, the operating pattern and results of the California and Texas systems could be duplicated in the national system. The evidence is clear, they claim. Because the intrastate carriers are motivated solely or largely by economic goals, their performance is superior, and this is the way the national airlines should be run as well.

b. System Models. Economists who specialize in the air transport industry (Douglas, Eads, Miller, Jordan, et al) have done a fair amount of system modeling, which has provided the basis for much of their criticism of the existing system. The models appear to be very sound technically. On the other hand, as with most modeling, there are limits in the degree to which they can deal with the complexities of the system. They have required many simplifications and assumptions about the system and its components. Thus, the models per se raise doubts about the degree of their validity as predictors of actual system behavior. The modelers themselves have often recognized this and include appropriate reservations in discussions of their own work and that of others.

This observation does not discredit the modeling function as such. It has provided useful insights into possible system behavior under changed conditions, and useful hypotheses regarding change. But, at this stage of its development, while modeling provides some guidance, it would be difficult to rely on it as a foundation upon which to base sweeping changes in regulatory policy.

2. The Proregulation Evidence

a. Achievements of the Existing System. There has been less critical examination of the present system by proregulationists. However, those who advocate the status quo seem to be less inclined than its critics to probe for flaws. This is not to say that proponents of regulation have not been critical of the system or have not suggested or attempted changes in it. But

they have been largely content to let the system's performance achievements substantiate their contention that, on the whole, it has served the national interest well--certainly, better than any other system proposed or practiced elsewhere.

Proregulationists cite as evidence such performance measures as these: a 4.5-fold increase in service from 1960 to 1975; rate increases kept well below increases in the Consumer Price Index during this period; world technological leadership; and a safety record unmatched in transportation--averaging a fatality rate of 0.22 percent per 100 million passenger miles flown.

b. Comparisons with Other Systems. As additional evidence for their arguments, proregulationists point out that the U.S. air transport system surpasses systems in all other countries. It is the acknowledged pace-setter in terms of quality, service, technology, and price. European per-mile fares are much higher than in the United States. For example, service from Washington to Boston costs $.111 per passenger mile, while service from London to Frankfurt, a comparable distance, costs $.286 per passenger mile.

Also cited as evidence is the North Atlantic market, which has all the competition a free market proponent could desire, but some undesirable consequences as well: predatory pricing, carrier failure, marginal cream-skimming operations, widespread illegal practices, stranded travelers. This, proregulators claim, is a forecast of what we can expect from a nonregulated system in this country.

Interestingly enough, proregulators also use the intrastate systems as evidence in support of their position. They tend to discount the fare differentials achieved in California and Texas, maintaining that these systems are nothing like the national system and that no valid comparisons can be made. At the same time, they claim the systems demonstrate that the intrastate pattern would not serve the traveling public well, producing widespread instability among carriers and erratic, lower quality service to many markets. Specifically, they cite:

- An 87 percent failure for California intrastate carriers from 1946 to 1965, as well as continual change in the cities served, except for the three major cities.

- Rate wars and destructive competition leading to fare reductions in the short term, but rising fares as monopoly positions were achieved by the surviving carriers.

- Carriers entering the market based on availability of inexpensive used aircraft, not market demands. In California, six out of eight carriers entered the market in 1949 to 1950. Six additional carriers entered the market in 1962 to 1965 and five folded, some virtually without notice.

- Though good service in high-density markets, poor or nonexistent service in remaining markets.

- A poorer safety record.

- After the initial adjustment period, emergence of one strong intrastate carrier in each market in a near monopoly position. Today, only PSA and Air California survive in California.

F. Evaluation of the Existing Evidence

1. The Anti-Regulation Evidence

How useful is the evidence obtained from the Texas and California systems in predicting the consequences of the changes that have been proposed in the national system? What kind of answers does the intrastate experience give us?

It has always been considered questionable to generalize from the particular. At a minimum it is essential that the two should have the same characteristics. But the California and Texas systems do not appear to share the same qualitative characteristics as the interstate system. For this reason, it is risky to try to use their experience to predict system-wide behavior.

The efficiencies and consequent fare reductions the Texas and California intrastate carriers are credited with have been achieved in very dense markets, flying very simple route structures, with one class of service, between a limited number of city pairs. Neither system serves scattered, low-density markets. Neither system must accommodate interline transfers.

What this suggests is that if similar markets could be isolated from the rest of the national system--isolated from the vast majority of other city pairs served--fares might be reduced in these markets, absent regulation. But the high-density markets in the national system are not isolated; they are part of a complex and highly interdependent network. Therefore, the California and Texas experience provides us with very little in the way of answers about the effect that de-regulation might have on the system as a whole, and that is what concerns us. We need answers to these questions:

- What will happen in the less dense markets?

  --Will service be dropped from a large number of cities?

  --Will someone subsidize service to the cities dropped?

  --Will fares rise in these markets?

- Will markets eventually achieve some measure of stability?

  --With competitive carriers in most markets?

  --With monopoly carriers in most markets?

- Will interline agreements remain in areas, among others, of:

  --Baggage transfer?

  --Ticket sales and clearing?

Even in the markets to which the Texas and California experience is most directly comparable, questions remain about not only the usefulness but the validity of the evidence. The most frequently drawn comparison is that between the intrastate Los Angeles/San Francisco service and the interstate Boston/Washington or New York/Washington service. Although the routes are roughly comparable in distance, they have significantly different fares--for example, $20.46 for the 338-mile journey from Los Angeles to San Francisco versus $45.37 for the 399-mile journey from Boston to Washington. However, to look only at distance in evaluating the fares can be misleading, because there are substantial differences between the two areas:

- Weather is more of a problem in the Northeast. Although it is discounted by anti-regulationists, a case can certainly be made that weather is a factor in airline costs.

- Airports are more congested in the Northeast, and create delays that add substantially to total flight costs.

- Flying times are slower in the Northeast. Using published schedules (which do not reflect either air traffic delays or weather problems), one can express fares in terms of cost per hour rather than cost per mile and see the following:

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	Weighted Average Fare/Mile[1]	Weighted Average Fare/Block Hour[2]
California Markets[3]	$.0716	$23.51
Northeast Markets[4]	$.1398	$30.42
% Difference	95%	29%

There is also evidence that the fare differentials may become less prominent in the long run. For example, the California carriers have been raising fares faster than the carriers in the Northeast:

	Weighted Average Fare		
	7/1/70	6/1/75	% Change
California Markets	$15.47	$24.02	55%
Northeast Markets	$23.98	$33.74	41%

(Pacific Southwest Airlines in California recently requested a 16 percent fare increase and received a 6.5 percent interim increase along with a sharp reproof from the CPUC.)

Another difference worth noting is that lower fares are possible in California and Texas because the intrastate carriers pay far lower salaries than those paid by the interstate carriers. In part this is because their labor force is less unionized and has less seniority. Labor costs, along with fuel, are among the most substantial operating costs in the industry.

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[1] Based on June 1, 1975 fares weighted on the basis of 1973 on-line O&D passengers.

[2] Based on weighted average of scheduled elapsed time for all carriers as shown in the June 1, 1975 Official Airline Guide.

[3] Los Angeles-San Francisco, San Diego-San Francisco, San Diego-Los Angeles.

[4] Boston-New York, Boston-Washington, New York-Washington.

Cost differentials in the Texas markets are open to question for yet another reason. Southwest Airlines has lower fares than either the trunk carrier, Braniff, or the local service carrier, Texas International, in the Dallas-Fort Worth and Houston markets. But Southwest has refused to support the new airports recently built in those markets. Southwest (not being in existence at the time) did not participate in the agreement in which the other airlines guaranteed to transfer their service to the new facilities--in effect underwriting the new airports. Thus, Southwest has taken advantage of its unique position and continued to use the old facilities at Love Field and Hobby Field which are not only less expensive, but also much closer to the respective downtown cities. This has enabled Southwest (i) to win a significant market share and (ii) to operate very profitably. In a third Texas city, however--San Antonio--Southwest does not possess this unique advantage. It has been less successful in San Antonio and Braniff has held on to its share of the market.

The proregulators maintain that Southwest's actions predict the lack of concern for the overall health of the system that can be expected if carriers are freed from the responsibilities imposed by regulation. As noted, they also point to the high rate of carrier failure in the intrastate markets, the predatory pricing, and the chaos they claim has existed there at times, and project these conditions onto an unregulated national system. It is true that many carriers have gone broke in Texas and California trying to meet the competition there and that the public has suffered on occasion. However, if the experience of the intrastate markets cannot be extrapolated in the area of price, it cannot be extrapolated in the areas of service and stability either. The truth is that the intrastate systems--with their higher density, simpler route structures, better weather and flying times, and lack of interline responsibilities--are sufficiently dissimilar to the national system to render the evidence regarding their experience of little use in providing the answers we need.

2. The Pro-Regulation Evidence

Proregulators frequently make comparisons--generally unfavorable--between air transportation systems in other countries and our own. But these may not be really meaningful because of differences in size, geography, economy, and political systems. Thus, as evidence that the present system serves the national interest well, proregulators rely chiefly on its

performance achievements. How valid or useful is this evidence in determining whether the system could be improved with the changes that have been proposed?

From the point of view of stability and technical performance, it is difficult to fault the system, and this evidence stands up well. But the evidence is not consistent by any means. . .the system's financial performance leaves much to be desired. For some time--despite fare increases--it has failed to achieve the Board-mandated return to investors. Airline earnings have been erratic, on the average falling well below the 12 percent return on investment the Board has established as reasonable. Substantial disenchantment with the industry on the part of investors is evident: the industry stock index currently stands at 42 percent of 1967 prices.

Some of the smaller trunks have achieved Board targets for return on investment in recent years. However, three of the four largest have not. And all of the four largest have reported losses for one or more of the past three years. Troubled carriers blame their problems on a number of factors, particularly the fuel crisis and the recession. But unless management itself is at fault, one must conclude that a system that produces such unsatisfactory returns on its enormous investment is somewhat less than ideal.

At today's fare levels and load factors, the overall system has excess capacity--one of the anti-regulationists' chief criticisms. This contributes to the poor earnings problem. The industry believes that load factors are low because of recession-induced traffic weakness, compounded by the adverse effects of higher fares. It laments that it is caught in a cost-price squeeze because of soaring labor and fuel costs that force fare increases. But the industry also questions whether significantly higher load factors are desirable, raising some doubts as to whether reducing excess capacity is a serious objective for the carriers.

It is unclear whether excess capacity is due to (i) overinvestment by a technology-oriented management or (ii) a flaw in the system, which prevents price competition and encourages wasteful scheduling competition. Overinvestment itself may be a function of a regulatory system which

has been overly concerned with the survival of the existing certificated carriers. It may be that the system indulges questionable management practices, all the while restricting new entry, thereby protecting inefficient management from potentially sharper competitors.

The present system may also not have encouraged enough innovation in the direction of providing low-cost travel for the mass market--despite evidence that this market exists, and despite the focus of deregulators on this point. In most of the changes that have been made--coach travel, charter travel--the industry has had to be sharply nudged by competition before responding. This is not a blanket indictment. Some carriers have been more innovative than others. And most have attempted variations such as youth fares, family plans, and so forth.

Strictly speaking, however, there has been little or no real "experimentation" with the kinds of changes critics of the system have suggested. By and large proregulators have failed to counteract criticism with hard facts in support of their position. Little has been attempted in the way of an organized, systematic effort to (i) try a new approach under controlled conditions, (ii) gather data, and (iii) analyze results. In any case, there is very little data to document the success or failure of various approaches, and many approaches have been undertaken--or abandoned--without any clear evidence as to whether they were productive or not. In sum, the evidence for the pro-regulation position is limited and only partially convincing to an objective onlooker.

3. Conclusions

How useful is the evidence we have now?

- The economic models are instructive, but require many assumptions and simplifications. Considerable doubt is raised about their adequacy to predict the actual behavior of a complex and delicately balanced system.

- The assumptions as to the behavior of the public are even more tenuous. If there is one thing we know, it is that people do not always behave as we believe they should behave. Does the public want the lowest cost air transportation possible--nonscheduled if necessary? Or is it willing to pay more--if need be-- for more reliable service? Or does it want both options? How much capacity should the system have? How much competition? The Board has wrestled with these questions for years. Further information that gives us answers to these pivotal questions is necessary.

- The intrastate experience has given us some information. It tells us, for example, that it is just as possible for an air carrier to fail in California as in the national system. It also tells us that with greater price competition, fares tend to decline for a period, but may then begin to rise again. But how far? This we don't know. Neither do we know how lower fares and open entry in high-density markets affect fares and service in other markets. Or how many communities would lose air service, or suffer reduced air service, under a different system of regulation and how much government subsidy might be sought. Parties on both sides are frank to admit that they don't know the answers to these questions, that they can only "estimate."

- There are some sizable holes in the main argument proregulationists advance. The air transport industry rates high marks on performance, but lower marks on other measures--return to investors, for example. The present system compares well with air systems in other countries in stability and technical performance. But this is a questionable comparison. What the Board must consider is the present U.S. system as compared with different possible future U.S. systems.

- Moreover, at what price to the traveler have stability and technical performance been achieved? Has limited entry made the present system inefficient? Would price competition lead to lower fares?...or to predatory pricing? To more efficient carriers?...or to carrier failure? How would financial institutions react to a less stable system? We have some widely varying opinions on these important issues, but no real data.

On balance, then, we reach the interim conclusion that the available evidence is inadequate to settle the question of whether major changes should be made in the system at this time. Various approaches to the problem have been suggested. Further simulation, followed by impact analysis, is one. Monitoring of zone of reasonableness pricing in a very limited market is another. But both of these are subject to some criticism. The results, some argue, would be inconclusive, unacceptable as clear evidence to the opposition, and inadequate for responsible, effective decision-making.

It has also been suggested that the Board simply try deregulation and see what happens. Or that the Board deregulate in phases, allow pricing freedom followed by entry and exit freedom. Such a course presents obvious hazards.

Is there any approach that would evaluate the consequence of deregulation without taking unacceptable risks with the system itself? An approach has been developed and is suggested here. It is an empirical approach--one that, if followed properly, should generate reliable, real-world data. Some risk is present, but careful controls can keep it to an acceptable level.

Despite the lack of hard evidence, a debt is owed to the protagonists on both sides of the debate. They have raised the questions which we as public decision-makers must answer. The evidence they have generated has enabled us to identify the remaining information to be gathered ... the information critical to a thoughtful, objective evaluation of the consequences of responsible change.

PART III. SUGGESTED EXPERIMENTAL PROGRAM

As discussed in the prior section, the existing information base appears inconclusive. Before major changes can be made in the regulation of the domestic air transportation system, we need additional information, and more specific information. Questions should be answered in a way that will provide the Board and interested parties with enough information to predict with reasonable certainty what would be likely to happen if the approach taken in the experiments were extended and implemented system-wide. Answers will allow government policy to develop and evolve in ways that will make the air transport system more responsive to the needs of consumers, those who provide service, and the nation.

To develop needed answers a program of continuing experiments, as described below, is proposed.

In approaching the design of such experimentation, the primary focus has been on the consumers using the domestic air system and the companies directly or indirectly involved in providing service. A second objective has been to develop an approach that will be useful not only for the present effort, but also for what is hoped could be a regular process of evaluation and decision-making regarding the domestic air transport system.

In designing proposed experiments we have not introduced issues relating to the liberalization of charter rules, which might allow supplemental carriers to compete in terms of price and service with scheduled services in selected markets. Those issues must await the outcome of pending rulemaking proceedings before they can be included in the design of any experiment. In light of the pending Air Freight Rate Investigation and the Air Freight Forwarder Charters Investigation, we have confined our experiments to passenger operations since substantial policy issues regarding freight service are at issue in those proceedings.

A. Critical Questions

The experimentation must provide answers to the many questions that have been raised--posed in terms of new approaches to regulations. The key questions among these include:

- What will be the impact on fare levels? Will average nationwide fares rise or fall?

- What will be the impact on fare structure, including the relationship of fares as between:

  --high-density and low-density markets?

  --competitive and noncompetitive markets?

  --long-haul and short-haul markets?

  --different classes of service?

- What will be the impact on service:

  --Will communities lose service?

  --Will the number of flights change?

  --Will load factors increase or decrease?

  --How will non-stop service, single plane service, and single carrier connecting service be affected?

  --How will the interline service system be affected?

- What will be the impact on the number and types of carriers?

- What will be the effect on the marketing of air travel?

B. Experiment Dimensions

There are three multi-variable dimensions, or coordinates, to the proposed experiment:

- What should be evaluated (the "system" variables).

- Where the evaluation should take place (the location variables).

- When the evaluation should take place (the timing variables).

A fourth obvious dimension (how) involves the mechanics of the evaluation, including controls and enforcement.

1. The "System" Variables

There are many variables in the air system and an even greater range of options for variation within them. In the main, however, the regulatory debate focuses on three primary areas: (i) pricing/service--how much freedom carriers have in determining the fares they charge their customers for the classes of service provided; (ii) entry--how much freedom carriers have to enter markets they choose to serve; and (iii) exit--how much freedom carriers have to suspend or abandon service in a market.

A range of possibilities exists within each system variable. Some examples of the types of changes that could be implemented include:

- Pricing/Service

--No restrictions on fares charged by carriers for service they elect to provide. (Each carrier can set its own fare levels.)

or

--Gradual relaxation of rate-setting procedures over a stated time period. For example, in the first year, let fares fluctuate within a stated "zone of reasonableness." Then, in the second year, increase that zone. According to this strategy, the zone might permit fares to increase by 10 percent or decrease by 15 percent in the first year.

- Entry

--Complete freedom for anyone to enter a given market as long as aircraft and personnel meet FAA safety regulations.

or

--Opening up markets for carriers that serve a given city pair with a restricted certificate. Carriers would be allowed to fly non-stop between city pairs where they currently must make mandatory stops en route.

- Exit

--Complete freedom for carriers to leave a particular market whenever they wish. Participating carriers could drop service to any city that is part of the experiment.

or

--Freedom for carriers to leave a particular market after filing their intention to do so and after waiting a given length of time.

or

--Freedom for carriers to leave a market if they find a suitable replacement. Recent examples involve substituting air taxi service for local service operations.

2. The Location Variables

There are also many possibilities in terms of location. However, certain key factors impact on selection of markets for experimentation.

The location should be representative of the total system, yet it should only have a small impact on the total system. The location should have its own pattern of origin/destination traffic as well as a pattern of connecting and through traffic. There should generally be more than one carrier providing service now. Markets should involve both business and nonbusiness traffic. Finally, the choice of experimental markets should include an analysis of the impact lower fares might have upon the diversion of traffic from nearby markets.

In the context of possible test markets, major options include:

- Conducting system-wide experiments with virtually all carriers and cities participating.

or

- Restricting the experiments to a stated number of city pairs (specifically identified city pairs that have a particular characteristic deemed appropriate for evaluation under a particular plan).

or

- Restricting the experiments to an identifiable geographic area. For example, geographic area could be defined by the triangulation of three cities or it could be defined as the service within a particular set of adjacent states or regions.

or

- Restricting the experiments to cities within a given mileage category. For example, city pairs more than 1,500 miles apart or city pairs less than 300 miles apart.

or

- Conducting the experiment between two geographic areas that have reasonable traffic volumes between them.

3. The Timing Variables

The objective of the experiments would be to achieve significant results as soon as practicable. There appear to be two primary options, and either might be applied in different experiments:

- Allowing all regulatory changes to take effect at the start of the evaluation. While this option may be more like the real world, since all factors

impact at the same time, it is more difficult to identify the consequences of a particular relaxation and its particular impact on the system.

or

- Phasing the various regulatory changes over time. This approach would facilitate the identification of the impact of a particular change and would simplify the airlines' implementation task, but it may be less of a real world experiment. It would also mean that it would take longer to develop the desired information.

or

- Allowing a number of changes of limited degree to take place simultaneously, and then increasing the degree of freedom at a later time. This has real-world aspects, although it may take longer to get all the desired information.

C. Constraints

In developing proposed experiments, care was taken to identify the external and internal constraints that should operate. These dictate that the experiments should:

- Avoid injury to the total system and the public.
- Require no extraordinary investment in equipment and facilities.
- Operate within existing FAA safety regulations.
- Operate within existing statutory authority.
- Be capable of inauguration within a relatively short time.
- Produce useful, although not necessarily final, results within a reasonable time period.

- Be conducted by the Board without substantial new resources.

D. Suggested Experimental Program

A number of general approaches to the structure of the experiment were discussed above under the heading "Location Variables." Though it is not complete, the listing is illustrative of possible alternative structures. We have examined several of these alternatives, however, and have decided:

- The system-wide experiment is too risky.
- Experiments conducted (i) only within a single identifiable geographic area or (ii) even two geographic areas having reasonable traffic volume between them, do not appear capable of producing enough information on the critical questions.
- Experiments limited to city pairs only within a limited mileage category are too restrictive.

The conclusion was that, overall, it appeared most desirable to focus the experiment on city pairs that collectively meet requirements of (i) both long-haul and short-haul distance characteristics, (ii) both high-density and low-density volume characteristics, and (iii) both business and non-business traffic characteristics.

1. System Variable Elements of the Experiment(s)

After assessment of a number of approaches, the experiments described here are proposed for review and comment. In brief, we want to measure the reactions of the traveling public, participating carriers, and related interests to reduced regulation of price, service, either phased or unlimited free entry, and generally unrestricted exit.

It is contemplated that the two elements described here would be tested in selected markets as described in paragraph 2, below.

a. Entry/Exit

Entry would be allowable for all carriers holding authority at a terminal at either end of the test market, or at both ends. During a later phase, both certificated carriers not authorized to serve either terminal, and new carriers, would be allowed to enter the various markets.

Exit by any carrier serving the designated city pairs would be authorized as long as one carrier remained in the market. Alternatively, the last surviving carrier could be permitted exit, but would be required to give advance notice before dropping service. Air taxi service or other specialized service may provide the service, under careful monitoring.

b. Price/Service

Either price flexibility within a zone of reasonableness, or free pricing, might be permissible. It is currently contemplated that a zone of reasonableness would be established. In a later phase, however, the zone could be expanded or removed. For instance, in the initial stage of the experiment, carriers could be permitted pricing flexibility within a zone of reasonableness of 15 percent above and 15 percent below the normal fare recognized by the Board for the class of service involved. In the case of a new class of service, for which no fare norm is recognized, the zone of reasonableness could be calculated from a normal fare, based upon the difference between the fully allocated costs for the new class of service and those for normal coach service.

2. Markets (Location Variables)

Two distinct types of markets are proposed for application of the system variable elements discussed above: one essentially long-haul/high-density and the other medium-to-short-haul and medium-to-low-density.

a. Long-haul

It is contemplated that two or more long-haul (over 750 miles) markets and related short-haul, through service, feeder points could be selected.

b. Medium and short-haul

The proposal here calls for selection of four to seven markets, of light to medium density, in the under 750-mile range.

c. General characteristics

None of the long- and short-haul markets selected should represent too large a portion of any single carrier's existing traffic. To the degree practical markets should be relatively isolated/discrete vis-a-vis the total system. Long-haul markets should have heavy volume, including both business and non-business traffic.

3. The Expectations

The long-haul market tests will be designed to develop information in several areas, including, particularly, the significance and results of price freedom/competition. Impact on volume and type of traffic will be examined. In the shorter haul markets, key issues include the impact on fare levels and extent of service, although, as with the long-haul test-markets, other data is expected to be generated.

4. An Added Possibility

Another set of experiments could be conducted in city-pair markets involving satellite airports. These would be designed to measure phenomena which might not be capable of measurement through examination of only the selected, discrete city-pairs previously selected.

In these experiments, virtually free entry, and total or large price freedom might be allowed in a market that currently has no effective service between a city and the satellite of a major hub. Although a specific experiment is not here proposed, it is hoped that the proceeding will develop alternatives which will particularly test issues of entry.

E. Summary

A great debate has been unfolding regarding both the kind of air transportation system that should exist in this country and how it should be regulated. This debate has tended to polarize

the interested parties into two camps--those that favor the status quo, or the proregulators, and those that favor substantially less regulation, the deregulators. However, neither group has been able to present a sufficiently compelling case to end the debate one way or the other.

What is needed is additional data regarding industry performance under changed conditions of regulation. This data can then be evaluated by those responsible for air transportation policy and structure, and used to make desirable changes, if any, to the system.

The problem, however, is to develop the data without an unacceptable risk to the system. To devise a means of doing so was the objective of this effort. The product is a general use methodology and a suggested approach.

The approach taken was to create a plan to experiment with and evaluate the consequences of relaxing regulation on a selected basis.

In the experiment carriers would have greater freedom in setting fares and entering and exiting from selected, designated markets. Different time phasing might be employed in introducing relaxed regulatory constraints into the experimental markets.

This effort would require cooperation from the parties concerned, despite reservations that may exist. But is believed that the long-term interests of the system will be better served by an effort to develop, to the maximum extent feasible, a reliable information base for decision-making than by either action to precipitate change without an evaluation of the consequences, or resistance to change without exploration of the benefits of improvement.

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